

Amendments to the Claims:

1. (currently amended) A Piroplasmid protein comprising, ~~characterised in that said protein comprises an amino acid sequence having a similarity of at least 70% with the amino acid sequence depicted in~~ selected from the group consisting of:

- i) SEQ ID NO: 2 or,
- ii) immunogenic fragments of SEQ ID NO: 2,
- iii) SEQ ID NO: 4,
- iv) immunogenic fragments of SEQ ID NO: 4,
- v) SEQ ID NO: 6,
- vi) immunogenic fragments of SEQ ID NO: 6,
- vii) SEQ ID NO: 8,
- viii) immunogenic fragments of SEQ ID NO: 8,
- ix) SEQ ID NO: 10, [[or an]] and
- x) immunogenic fragment of SEQ ID NO: 10;

wherein said protein inhibits invasion of an organism of the family Piroplasmida.

2.-3. (cancelled)

4. (currently amended) A nucleic ~~Nucleic~~ acid, ~~characterised in that~~ wherein said nucleic acid encodes a protein according to claim 1, ~~or an immunogenic fragment of said protein.~~

5.-6. (cancelled)

7. (currently amended) A cDNA fragment comprising a nucleic acid according to claim 4 ~~one or more of the claims 4-6.~~

8. (currently amended) A recombinant ~~Recombinant~~ DNA molecule comprising

- i) a nucleic acid according to one or more of the claims 4-6 claim 4, or

ii) a cDNA fragment ~~according to claim 7, said nucleic acid or said cDNA fragment~~
being comprising (i);

wherein said cDNA fragment or said nucleic acid is under the control of a functionally linked promoter.

9. (currently amended) A live ~~Live~~ recombinant carrier comprising

i) a nucleic acid according to ~~one or more of the claims 4—6~~ claim 4,

ii) a cDNA fragment ~~according to claim 7, said nucleic acid or said cDNA fragment~~
~~being under the control of a functionally linked promoter~~ comprising (i),

iii) a recombinant DNA molecule ~~according to claim 8~~ comprising (i), or

iv) a recombinant DNA molecule comprising (ii);

wherein said cDNA fragment or said nucleic acid is under the control of a functionally linked promoter.

10. (currently amended) A host ~~Host~~ cell comprising

i) a nucleic acid according to ~~one or more of the claims 4—6~~ claim 4,

ii) a cDNA fragment ~~according to claim 7~~ comprising (i), ~~said nucleic acid or said cDNA fragment being under the control of a functionally linked promoter,~~

iii) a recombinant DNA molecule comprising (i) ~~according to claim 8,~~

iv) a recombinant DNA molecule comprising (ii),

v) ~~or~~ a live recombinant carrier comprising (i),

vi) a live recombinant carrier comprising (ii),

vii) a live recombinant carrier comprising (iii), or

viii) a live recombinant carrier comprising (iv) according to claim 9;

wherein said nucleic acid or said cDNA fragment are under the control of a functionally linked promoter.

11. (currently amended) A vaccine ~~Vaccine~~ comprising a protein according to claim 1 ~~one or more of the claims 1-3~~ or an immunogenic fragment of said protein, a nucleic acid according to one or more of the claims 4-6, a cDNA fragment according to claim 7, a recombinant DNA molecule according to claim 8, a live recombinant carrier according to claim 9, or a host cell according to claim 10, or a combination thereof, and a pharmaceutically acceptable carrier.

12. (currently amended) The vaccine ~~Vaccine~~ according to claim 11, ~~characterised in that said vaccine comprises~~ further comprising an adjuvant.

13. (currently amended) The vaccine ~~Vaccine~~ according to claim 11, ~~one or more of the claims 11-12~~, characterised in that said vaccine comprises further comprising an additional immunoactive component or a nucleic acid encoding said additional immunoactive component.

14. (currently amended) A vaccine comprising ~~Vaccine, characterised in that said vaccine comprises~~ an antibody against a protein according to claim 1 ~~one or more of the claims 1-3~~ or ~~an antibody against an immunogenic fragment of said protein, or a combination thereof~~, and a pharmaceutically acceptable carrier.

15. (cancelled)

16. (currently amended) A Use of a protein according to one or more of the claims 1-3 or an immunogenic fragment of said protein for the manufacture of a vaccine for prophylactic or therapeutic treatment of an infection or its clinical signs caused by a Piroplasmid organism comprising administering a vaccine comprising a protein according to claim 1.

17. (currently amended) A Use of a nucleic acid sequence according to one or more of the claims 4-6, a cDNA fragment according to claim 7, a recombinant DNA molecule according to claim 8, a live recombinant carrier according to claim 9, or a host cell according to claim 10 for

~~the manufacture of a vaccine for~~ prophylactic or therapeutic treatment of an infection or its clinical signs caused by a Piroplasmid organism comprising administering a vaccine comprising a nucleic acid according to claim 4.

18. (currently amended) A diagnostic ~~Diagnostic~~ test for the detection of a nucleic acid associated with a Piroplasmid organism comprising

(i) ~~, characterised in that the test comprises a nucleic acid, said nucleic acid being at least 70 % similar to the~~ a nucleic acid sequence depicted in SEQ ID NO: 1, 3, 5, 7, or 9, or

(ii) a nucleic acid that is complementary to (i) ~~said nucleic acid, or~~

(iii) a nucleic acid that hybridises to (i) under stringent conditions;

wherein ~~either of the nucleic acids (i), (ii) and (iii) each~~ have a length of at least 15 nucleotides.

19. (currently amended) A diagnostic ~~Diagnostic~~ test for the detection of antibodies against a Piroplasmid organism comprising ~~, characterised in that said test comprises a protein according to claim 1 one or more of the claims 1-3, or an immunogenic fragment of said protein, or a combination thereof.~~

20. (currently amended) A diagnostic ~~Diagnostic~~ test for the detection of antigenic material from a Piroplasmid organism comprising ~~, characterised in that said test comprises an antibody against a protein according to claim 1 one or more of the claims 1-3 or an antibody against an immunogenic fragment of said protein, or a combination thereof.~~

21. (new) A vaccine comprising a nucleic acid according to claim 4 and a pharmaceutically acceptable carrier.

22. (new) A vaccine comprising a cDNA fragment according to claim 7 and a pharmaceutically acceptable carrier.

23. (new) A vaccine comprising a recombinant DNA molecule according to claim 8 and a pharmaceutically acceptable carrier.
24. (new) A vaccine comprising a live recombinant carrier according to claim 9 and a pharmaceutically acceptable carrier.
25. (new) A vaccine comprising a host cell according to claim 10 and a pharmaceutically acceptable carrier.